

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

PARKER et al

Atty. Ref.: 553-74

Serial No. (unassigned)

Group:

Filed: July 16, 2003

Examiner:

For: AN OPTICAL WAVEGUIDE STRUCTURE

\* \* \* \* \*

July 16, 2003

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT**

As suggested by 37 C.F.R. 1.97, the undersigned attorney brings to the attention of the Patent and Trademark Office the EP Search Report references listed on the attached form PTO-1449, a copy of each of which is enclosed. This is not to be construed as a representation that a search has been made or that no better prior art exists, or that a reference is relevant merely because cited.

The Examiner is requested to initial the attached form PTO-1449 and to return a copy of the initialed document to the undersigned as an indication that the attached references have been considered and made of record.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: 

Stanley C. Spooner  
Reg. No. 27,393

SCS:kmm

1100 North Glebe Road, 8th Floor

Arlington, VA 22201-4714

Telephone: (703) 816-4000

Facsimile: (703) 816-4100

**INFORMATION DISCLOSURE  
CITATION**

ATTY. DOCKET NO.

553-74

SERIAL NO.

(unassigned)

APPLICANT

PARKER et al

(Use several sheets if necessary)

FILING DATE

GROUP

July 16, 2003

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

**OTHER DOCUMENTS** (including Author, Title, Date, Pertinent pages, etc.)

	G. Meltz et al, "Bragg Grating Formation and Germanosilicate Fiber Photosensitivity" <i>International Workshop on Photoinduced Self-Organization effects in Optical Fiber</i> , May 1991, pages 185-199
	S.V. Gaponenko et al, "Spontaneous Emission of Dye Molecules, Semiconductor Nanocrystals, and Rare-Earth Ions in Opal-Based Photonic Crystals" <i>Journal of Lightwave Technology</i> , Vol. 17, No. 11, Nov. 1999, pages 2128-2137
	H. Benisty et al, "Radiation Losses of Waveguide-Based Two-Dimensional Photonic Crystals: Positive Role of the Substrate" <i>Applied Physics Letters</i> , Vol. 76, No. 5, Jan. 2000, pages 532-534
	H.W.P. Koops et al, "Two-Dimensional Photonic Crystals Produced by Additive Nanolithography with Electron Beam-Induced Deposition Act as Filters in the Infrared" <i>Microelectronic Engineering</i> , Vol. 57-58, 2001, pages 995-1001
	Koops, "Photonic Crystals Built by Three-Dimensional Additive Lithography Enable Integrated Optics of High Density" <i>Proceedings of the SPIE</i> , Vol. 2849, Aug. 1996, pages 248-256
	M.D.B. Charlton et al, "Visible Wavelength Photonic Crystal Devices: Experimental Investigations of Up-Scattering and Line defect Waveguide Bends" <i>IEE Colloquium, Microengineering in Optics and Optoelectronics</i> , Nov. 1999, pages 7/1-6

\*Examiner

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.



DOCUMENTS CONSIDERED TO BE RELEVANT																		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim																
X	WO 02 25781 A (UT BATTELLE LLC) 28 March 2002 (2002-03-28)  * page 18, paragraph 2 - paragraph 3 * ----	1,2, 5-10, 12-17, 19,20																
X	WO 01 77726 A (CHARLTON MARTIN DAVID BRIAN :ZOO ROB MAJD ELIAS (GB); BTG INT LTD ( ) 18 October 2001 (2001-10-18)  * abstract; claim 13 * ----	1,2, 5-10, 12-17, 19,20																
X	MELTZ G ET AL: "BRAGG GRATING FORMATION AND GERMANOSILICATE FIBER PHOTOSENSITIVITY" INTERNATIONAL WORKSHOP ON PHOTOINDUCED SELF-ORGANIZATION EFFECTS IN OPTICAL FIBER, 10-11 MAY 1991, BELLINGHAM, WA, US, vol. 1516, 1991, pages 185-199, XP000472801 * the whole document * ----	1,3-5, 15,19,21																
X	EP 1 168 008 A (MATSUSHITA ELECTRIC IND CO LTD) 2 January 2002 (2002-01-02) * abstract * ----	3,4,18, 21																
X	GAPONENKO S V ET AL: "SPONTANEOUS EMISSION OF DYE MOLECULES, SEMICONDUCTOR NANOCRYSTALS, AND RARE-EARTH IONS IN OPAL-BASED PHOTONIC CRYSTALS" JOURNAL OF LIGHTWAVE TECHNOLOGY, IEEE. NEW YORK, US, vol. 17, no. 11, November 1999 (1999-11), pages 2128-2137, XP001033279 ISSN: 0733-8724 * the whole document * -----  -/--	1,15,19																
The present search report has been drawn up for all claims																		
Date of completion of the search 13 January 2003		Examiner Verbandt, Y																
<table border="0"><tr><td>CATEGORY OF CITED DOCUMENTS</td><td>T : theory or principle underlying the invention</td></tr><tr><td>X : particularly relevant if taken alone</td><td>E : earlier patent document, but published on, or</td></tr><tr><td>Y : particularly relevant if combined with another</td><td>after the filing date</td></tr><tr><td>document of the same category</td><td>D : document cited in the application</td></tr><tr><td>A : technological background</td><td>L : document cited for other reasons</td></tr><tr><td>O : non-written disclosure</td><td>.....</td></tr><tr><td>P : intermediate document</td><td>&amp; : member of the same patent family, corresponding</td></tr><tr><td></td><td>document</td></tr></table>			CATEGORY OF CITED DOCUMENTS	T : theory or principle underlying the invention	X : particularly relevant if taken alone	E : earlier patent document, but published on, or	Y : particularly relevant if combined with another	after the filing date	document of the same category	D : document cited in the application	A : technological background	L : document cited for other reasons	O : non-written disclosure	.....	P : intermediate document	& : member of the same patent family, corresponding		document
CATEGORY OF CITED DOCUMENTS	T : theory or principle underlying the invention																	
X : particularly relevant if taken alone	E : earlier patent document, but published on, or																	
Y : particularly relevant if combined with another	after the filing date																	
document of the same category	D : document cited in the application																	
A : technological background	L : document cited for other reasons																	
O : non-written disclosure	.....																	
P : intermediate document	& : member of the same patent family, corresponding																	
	document																	

1  
EPO FORM 1503 03.02 (P04C17)



DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	US 6 134 369 A (KUROSAWA TOSHIHARU) 17 October 2000 (2000-10-17) ---	
A	BENISTY H ET AL: "RADIATION LOSSES OF WAVEGUIDE-BASED TWO-DIMENSIONAL PHOTONIC CRYSTALS: POSITIVE ROLE OF THE SUBSTRATE" APPLIED PHYSICS LETTERS, AMERICAN INSTITUTE OF PHYSICS. NEW YORK, US, vol. 76, no. 5, 31 January 2000 (2000-01-31), pages 532-534, XP000934641 ISSN: 0003-6951 ---	
A	KOOPS H W P ET AL: "Two-dimensional photonic crystals produced by additive nanolithography with electron beam-induced deposition act as filters in the infrared" MICROELECTRONIC ENGINEERING, ELSEVIER PUBLISHERS BV., AMSTERDAM, NL, vol. 57-58, September 2001 (2001-09), pages 995-1001, XP004302374 ISSN: 0167-9317 ---	
A	KOOPS H W P: "PHOTONIC CRYSTALS BUILT BY THREE-DIMENSIONAL ADDITIVE LITHOGRAPHY ENABLE INTEGRATED OPTICS OF HIGH DENSITY" PROCEEDINGS OF THE SPIE, SPIE, BELLINGHAM, VA, US, vol. 2849, 5 August 1996 (1996-08-05), pages 248-256, XP000617864 --- -/--	
The present search report has been drawn up for all claims		
Date of completion of the search 13 January 2003		Examiner Verbandt, Y
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document		

1  
EPO FORM 1503 03.82 (P04C17)



DOCUMENTS CONSIDERED TO BE RELEVANT				
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim		
A	CHARLTON M D B ET AL: "Visible wavelength photonic crystal devices: experimental investigations of upscattering, and line defect waveguide bends" IEE COLLOQUIUM. MICROENGINEERING IN OPTICS AND OPTOELECTRONICS (REF. NO.199/187), IEE COLLOQUIUM. MICROENGINEERING IN OPTICS AND OPTOELECTRONICS, LONDON, UK, 16 NOV. 1999, pages 7/1-6, XP002226959 1999, London, UK, IEE, UK -----			
The present search report has been drawn up for all claims				
Date of completion of the search 13 January 2003		Examiner Verbandt, Y		
<table><tr><td><b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</td><td>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... &amp; : member of the same patent family, corresponding document</td></tr></table>			<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document	T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document	T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document			

TECHNICAL FIELDS  
SEARCHED (Int.CL.7)

1  
EPO FORM 1503 03.82 (P04C17)

# ANNEX TO THE STANDARD SEARCH REPORT NO.

RS 108733

This annex lists the patent family members relating to the patent documents cited in the above-mentioned search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

13-01-2003

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0225781	A	28-03-2002	AU	9120001 A	02-04-2002
			WO	0225781 A2	28-03-2002
WO 0177726	A	18-10-2001	AU	4669501 A	23-10-2001
			EP	1269229 A1	02-01-2003
			WO	0177726 A1	18-10-2001
EP 1168008	A	02-01-2002	CN	1333470 A	30-01-2002
			EP	1168008 A2	02-01-2002
			JP	2002236226 A	23-08-2002
			US	2001054681 A1	27-12-2001
US 6134369	A	17-10-2000	JP	2000314815 A	14-11-2000